

# TERRESTRIAL THREATENED and ENDANGERED SPECIES MITIGATION PLAN for the

## Proposed Sterling Rock Creek Mine

Clarification, December 30 2002

This mitigation plan displays the specific items identified that are required to reduce, eliminate, or provide substitution for environmental consequences to species federally listed as threatened or endangered. It covers implementing alternative five as displayed in the final environmental impact statement for the STERLING Rock Creek Mine project and supports requirements from the U.S. Fish and Wildlife Service Biological Opinion. This mitigation plan will be implemented by STERLING and appropriate state and federal agencies. Timing of completion of this plan is tied to three phases of mine activity (evaluation adit – requires letter to proceed, construction – requires letter to proceed, operation – requires letter to proceed, estimated to start 5 years after construction starts).

### A. To reduce mortality risk (avoid incidental take) to Threatened and Endangered species STERLING will comply with the following, under the direction of the Forest:

1. Develop a transportation plan designed to minimize mine related vehicular traffic, traveling between state highway 200 and the mill site, and minimize parking availability at the plant site. Busing employees to the mill site will be a part of the plan. Forest Service approval required. The plan will be in place prior to starting the evaluation adit.
2. NOT use salt when sanding during winter plowing operations to reduce attracting big game, which can result in vehicles killing them. That in turn could draw bald eagles, wolves and grizzly to the road corridor and increase mortality.
3. Daily remove vehicular killed deer and elk from road rights-of-way within the permit area and along roadways used for access or hauling ore (EDR-150, 150A and new roads built for the project). Road kills would be moved at least 50 feet beyond the right-of-way clearing or as far as necessary to be out of sight from the road. During construction and the first three years of full operation, STERLING would monitor the number of big game animals killed on these roads and report findings annually. They would also monitor and report (within 24 hours) all grizzly bear, bald eagle, lynx, wolf and black bear mortalities within the permit area. If a T&E species mortality occurs, and the grizzly bear specialists or law enforcement officer feel it is necessary to avoid grizzly bear or other T&E species mortality, STERLING would be required to haul the road kill to a dumping location approved by Montana Fish, Wildlife and Parks (MFWP).
4. Construct power lines following criteria outlined by Olendorff, Miller and Lehman (1981) to reduce potential for electrocution of bald eagles.
5. Fund a local MFWP grizzly bear management specialist (with focus on public information and education) position to aid in grizzly bear conservation for the life of the mine. This would have been the same position required in the Record of Decision for the Montanore

Project (9/93), not an additional one. Since the Montanore project is not proceeding, STERLING will be responsible to fully fund the position. Funding would be provided prior to starting the evaluation addit to cover the first 3 years. The position would be stationed in the lower Clark Fork valley. The purposes are to reduce mortality risk through (1) education of the public on the law and penalty for violation (illegal killing of T&E species); (2) education of hunters on bear identification to reduce accidental killing of grizzly and (3) educate the public on biological needs of the grizzly so that an understanding exists that reduces "social jeopardy" and 4) educates the public on storage of human and pet (animal) food in bear habitat to prevent and correct sanitation problems. The position description and an initial list of work items will be developed jointly by the agencies (including but not limited to Forest Service, U.S. Fish and Wildlife Service (here after "the Service"), Montana Fish, Wildlife and Parks) and Sterling representatives.

6. Fund a local MFWP law enforcement position for the life of the mine. This would have been the same position required in the Record of Decision for the Montanore Project (9/93), not an additional one. Since the Montanore project is not proceeding, STERLING will be responsible to fully fund the position. Funding would be provided prior to starting the evaluation addit to cover the first 3 years. The position would be stationed in the lower Clark Fork valley. The position description and an initial list of work items will be developed jointly by the agencies (including but not limited to Forest Service, the Service, Montana Fish, Wildlife and Parks) and Sterling representatives.

*The Forest shall ensure that the law enforcement and information and education positions (grizzly bear personnel) required in the revised mitigation plan comply with the following :*

- a. Positions shall be located in the Clark Fork River side of the ecosystem.*
- b. Grizzly bear personnel shall be new positions with Montana Fish Wildlife and Parks.*
- c. Funding intended for the grizzly bear personnel positions will not be used to support already existing positions with Montana Fish Wildlife and Parks.*
- d. Duties for the law enforcement position shall be designed as a State grade 14 and will be primarily directed at wildlife issues in the southern Cabinet Mountains of the CYE.*
- e. Duties for the information/education position shall be designed as a grizzly bear management specialist State grade 14 and will be specifically tied to bear activities in the southern Cabinet Mountains of the CYE.*
- f. Grizzly bear personnel shall be fully-funded for the life of the mine through the reclamation period and including shut-down periods to provide for long-term consistency, the establishment of relationships with the resident public, familiarity with issues and potential problems in the area, and to address the large number of people who may remain in the area even in the event of temporary mine shut-downs.*
- g. Grizzly bear personnel will be operational, with all supportive equipment, vehicles and*

*gear, prior to the letter to proceed on the evaluation adit.*

*h. Establish and maintain (through coordination with the two grizzly bear personnel) a mandatory reporting system to ensure that the Sterling Mining Company and U.S. Forest Service employees are required to immediately report any black bear or grizzly bear incidents, observations or mortalities to both grizzly bear personnel to ensure that pre-emptive management, hazing, or removal of food attractants would occur to avoid further risks of habituation, mortality or displacement of grizzly bears. The reporting system would also be coordinated with the Service grizzly bear management specialist in Libby and would provide a mechanism to collect reliable information from the public on such incidents, although such reporting could not be required.*

7. Use bear-resistant containers to hold attractants at all Rock Creek facilities. Remove contents in a timely manner (weekly unless a problem develops or grizzly bear personnel recommend a more frequent schedule). Containers will be in place at each mine facility site prior to starting any work on each site.
8. Avoid the use of clovers or other plants attractive to black or grizzly bears in the seed mix used on open roadways or any facility associated with the Rock Creek Mine (except as rehabilitation on closed roads or mitigation habitat where attracting bears would be encouraged).
9. Prohibit employees from carrying firearms within the permit area, except for security officers and other designated personnel. Identify consequences for violations in the an employment contract so employees will be aware of consequences prior to beginning their employment.
10. Prohibit employees from feeding wildlife (including dropping food stuffs from lunches etc.) to avoid attracting bears or other wildlife into conflicts with people and encouraging habituation. Identify consequences for violations in an employment contract so employees will be aware of consequences prior to beginning their employment.
11. Fund the acquisition of bear resistant garbage containers to be placed in all developed campgrounds within Bear Management Units 1, 2, 3, 4, 5, 6, 7, 8 and 9 (pack in/pack out sites will not require garbage containers). *The Forest shall ensure that Sterling Mining Company provide bear resistant garbage receptacles for all U.S. Forest Service campgrounds an facilities where garbage facilities are normally provided within the Cabinet portion of the CYE recovery zone (in BMUs 1-9). This includes those in MS-3 habitat, which often serve as the greatest risk to habituate bears and increase risk of bear removal through defense of life or property incidents or management action.*
12. Require mine employees (including all management staff) to attend training related to living and working in grizzly bear habitat prior to starting work and on an annual basis thereafter or as scheduled by the grizzly bear management personnel.

**B. To maintain habitat effectiveness for Threatened and Endangered species, STERLING will, under the direction of the Forest:**

1. Secure or protect (through conservation easement, including road closures, or acquisition in fee with conveyance of fee or perpetual conservation easement to the Forest Service) from development (including but not limited to housing, motorized access) and use (timber harvest, grazing, mining) replacement habitat to compensate for acres lost by physical alterations, or acres with reduced habitat availability due to disturbance. Replacement acres for Alternative Five are: 2350. The "in kind" replacement acres must provide 2.61 early (6133.5 total), 1.61 late (3783.5 total) for an overall 2.11 habitat unit value (4958.5 total overall HUs). Replacement habitat will be provided using the following schedule:

Activity Area	Replacement Acres	Timing
Evaluation Adit	53	Prior to Eval. Adit
Tailings & AF	806	Prior to Construction
Mill & AF	248	Prior to Construction
Ventilation Adit	10	Prior to Construction
New Roads	102	Prior to Construction
Existing Roads (Reconstruction)	565	Prior to Construction
Existing Roads (Increased Influence)	566	Prior to Operations
Total Alternative 5	2350	Prior to Operations

AF = Associated Features

This schedule will have all replacement habitat (except ventilation adit) in place prior to starting full operations (end of year 5). Replacement habitat to the ventilation adit will be in place prior to construction, if the adit becomes necessary.

Either fee title or conservation easements are acceptable. Conservation easements will be in perpetuity and transferred to the Forest Service. If fee lands are retained in private (non-Forest Service ownership) a conservation easement protecting the land in perpetuity must be conveyed to the Forest Service. Fee title lands may be considered for donation or land exchange with the Forest Service. Costs of processing land exchanges, and preparing and accepting conservation easement by the Forest Service for these acres will be funded by Sterling. Land exchanges would be for equal valued lands as determined by a federal land appraisal. Any exchange must be beneficial to the Forest Service. First choice for replacement habitat is within the disturbed BMUs (4,5,6). If adequate replacement acres are not available in those BMUs then acres may be found in other BMUs (7 & 8) within the southern portion of the Cabinet Mountains. See the Replacement Habitat Assessment for acceptable lands to consider **(Not available to public until replacement habitat mitigation completed).**

Forst Service and US Fish and Wildlife Service will have final approval of mitigation acres and associated conservation easements prior to closing and recording.

*The Forest shall ensure that the 2350 acres of mitigation properties be managed for grizzly bear habitat in perpetuity. Properties acquired in fee by Sterling Mining Company must either be transferred to the U.S. Forest Service or must be protected by perpetual conservation easement transferred to the U.S. Forest Service. Easement properties acquired by Sterling must be transferred to the U.S. Forest Service. The 2350 acres of mitigation properties must meet the following requirements:*

*a) Mitigation properties shall be pre-approved by the Service to meet one or more of the following:*

- i restore or improve bear security habitat (HE and core) in the Southern Cabinet Mountains, particularly in the constricted north-south grizzly bear movement corridor;*
- ii improve habitat conditions related to established access standards (open motorized route density, total motorized route density) in BMUs 4,5, and 6,*
- iii reduce existing threats of development, food attractants or mortality risks in the Southern Cabinets,*
- iv reduce potential threats of development, food attractants or mortality risks in the Southern Cabinets,*
- v protect seasonally important habitats, with an primary emphasis on spring, and secondary emphasis on fall habitats*
- vi would maintain or increase MS-1 habitat (including the potential of acquiring and converting MS-3 properties or lands adjacent to the CYE recovery zone that have high mortality risks to MS-1 if those risks could be eliminated under Federal ownership).*

*b) Fee-title properties or transfers (trades) of NFS lands must meet standards, requirements and legal processes for Federal acquisition or trade, including, but not limited to:*

- i approval by the Office of General Counsel,*
- ii be a Warranty Deed conveyance*
- iii comply with Department of Justice standards,*
- iv be free of hazardous materials, or develop an agreement among MOU signers as to appropriate remedy prior to acquisition*

- v *include all surface and sub-surface rights including rights-of-ways, mineral claims, and/or other easements, unless otherwise approved by the Service*
- vi *be acquired in priority order. Lower priority acquisitions may be allowed, when approved in advance by the Service to ensure that such a property would contribute to avoiding jeopardy.*
- vii *meet fair market appraised value, according to U.S. Forest Service appraisal processes with the allowance that the Sterling Mining Company could contribute additional funds to facilitate unequal appraised value trades, as approved by the Management Plan if the affected parcels are approved in advance by the Service as being important to avoid jeopardy*
- viii *be acquired and recorded prior to the letter to proceed on the associated phase of the mine, with total acquisitions completed prior to the letter to proceed on the construction phase of the mine.*

c) *Conservation easements must include language approved in the Management Plan and meet standards, requirements and legal processes for Federal acquisition or trade, including, but not limited to:*

- i *approval by the Office of General Counsel,*
- ii *have the conservation easement be attached to the Warranty Deed*
- iii *comply with Department of Justice standards,*
- iv *be free of hazardous materials, or develop an agreement among MOU signers as to appropriate remedy prior to acquisition*
- v *Include all surface and sub-surface rights including rights-of-ways, mineral claims, and/or other easements, unless otherwise approved by the Service*
- vi *be acquired in priority order. Lower priority acquisitions may be allowed, when approved in advance by the Service to ensure that such a property would contribute to avoiding jeopardy.*
- vii *meet fair market appraised value, according to U.S. Forest Service appraisal processes with the allowance that the Sterling Mining Company could contribute additional funds to facilitate unequal appraised value trades, as approved by the Management Plan if the affected parcels are approved in advance by the Service as being important to avoid jeopardy*

- viii *be acquired and recorded prior to the letter to proceed on the associated phase of the mine, with all mitigation habitat acquired and recorded prior to the letter to proceed on the construction phase of the mine, excepting the mitigation habitat that may be necessary in the event the ventilation adit is required. Mitigation habitat for the ventilation adit would be acquired prior to the letter to proceed on development of the ventilation adit, should it be necessary.*

*The Forest shall implement access management improvements on lands acquired in the revised mitigation plan. The Service requires specific mitigation properties to be acquired to improve habitat security, core area, total motorized route density and open motorized route density and will assess other areas prior to acquisition to ensure these lands will be sufficient to avoid jeopardizing the CYE grizzly bear population. These specific areas will be withheld from public disclosure due to their sensitive nature until acquisitions have been finalized.*

*The Service will work with the Forest in determining how road management associated with that property can improve access standards, with the goal of managing BMU 4,5 and 6 above levels in the Access Amendment FEIS (March 2002). The Service believes that 35 years of 24 hour disturbances as expected with Rock Creek Mine necessitate access management at a conservative level while the disturbance is ongoing. The acquisition of mitigation habitat may provide opportunities to manage access management at these levels in BMU's 4,5, and/or 6. Should mitigation property be acquired that would enable access management at these levels, the Service expects that the Forest will provide the bears using BMU's 4,5 and 6 the optimum level of access management to reduce displacement and mortality risks during the life of the mine.*

2. Fund habitat enhancement, commensurate with loss of habitat effectiveness. Enhancements include, but are not limited to, prescribed fire to restore whitebark pine, road closures and obliterations. Enhancements are preferred in the affected BMUs, however if opportunities are not available, then work may be done in BMUs in the southern portion of the Cabinet Mountains. Generally enhancements would occur in relation to replacement habitat acres. Enhancements associated with replacement acres will occur in a timely manner as agreed to by the agencies.

BMU	% H.E. Change	Acres H.E. Mitigation
4	+ 1.0	0
5	- 1.1	348
6	- 0.3	136

- C. To reduce mortality risk, maintain habitat effectiveness, reduce incidental take and avoid jeopardy for Threatened and Endangered species the Kootenai National Forest, with STERLING funds, will:

1. Close the following roads prior to the start of construction phase (see maps):

Road Number	Road Name	Closure Miles	Closure Period	Closure Method
2285	Orr Creek	1.61	Yearlong	Barrier
2741X	unnamed	0.18	Yearlong	Barrier
2741A	unnamed	0.51	Yearlong	Barrier
150	Rock Creek	2.92	Yearlong	Gate *

\* 2.5 miles gated (south end), 0.42 miles obliterated (north end) - see map

2. Implement a mandatory food storage order for Bear Management Units 4, 5 and 6 prior to allowing Sterling to start the evaluation audit.
3. Monitor use on the Rock Lake and St Paul Lake trails to assure use levels do not exceed "high use" as defined by the IGBC. A recreational use management plan will be developed to assure high use does not occur. The plan will be implemented when monitoring indicates high use has occurred during one bear season. The plan will be prepared within 3 years of the signature date on the Record of Decision and must be signed by the involved agencies (Forest Service, US Fish & Wildlife Service).

**D. To address habitat constriction that reduces the potential to achieve CYE grizzly bear recovery goals (by impacting individuals in the Cabinet Mountains) and to avoid Jeopardy, STERLING will:**

1. Secure or protect (through conservation easement, including road closures) or acquisition in fee with conveyance of fee or perpetual conservation easement to the Forest Service from development (including but not limited to housing, motorized access) and use (timber harvest, grazing, mining) 100 acres of replacement habitat that will enhance the north to south habitat corridor in the Cabinet Mountains. These lands are in addition to those identified under mitigation item B-1. All acres of replacement habitat for the constriction impact will be secured prior to starting the evaluation audit. See the Corridor Replacement Habitat Assessment for acceptable lands to consider **(Not available to public until corridor replacement habitat mitigation completed)** Fee title lands within the corridor would be placed in public ownership either through donation or land exchange. Costs of processing land exchanges, and preparing and accepting conservation easement by the Forest Service for these acres will be funded by Sterling. Land exchanges would be for equal valued lands as determined by a federal land appraisal. Any exchange must be beneficial to the Forest Service. All land interest conveyed to the Forest Service must be acceptable and approved by the Office of General Counsel. Fee title land must be conveyed by Warranty Deed in accordance with Department of Justice standards. All property, or interest in property, shall be inspected for hazardous substances in accordance with law, regulation and policy. If hazardous substance are found an agreement needs to be reached on removal and remedial action.



*The Forest shall ensure that, the 100 acres of mitigation habitat required to enhance the north-south corridor in the Cabinet Mountains:*

- a. the fee title or perpetual conservation easement to the 100 acres of mitigation property, be acquired by or transferred to the U.S. Forest Service;*
- b. include the specific properties identified by the Service to avoid jeopardy (which will be released to the public when acquisition has been completed and recorded);*
- c. be pre-approved by the Service as properties that will avoid jeopardy, and, once approved, will be acquired and recorded prior to the letter to proceed on the evaluation addit;*
- d. be managed as grizzly bear security habitat (core) throughout the life of the mine, including the reclamation period and any temporary or extended shutdown periods, and thereafter managed in a manner consistent with grizzly bear conservation requirements;*
- e. maintain or improve existing baseline core requirements (or other goals affiliated with Alternative E of the FEIS for Access Amendment on the Forest, Lolo and Panhandle National Forests, USDA 2002b); and*
- f. have any habitat enhancement activities needed to improve the mitigation properties, such as road closures or restoration, be planned and funded prior to the letter to proceed on the associated phase of the mine. Implementation will occur as soon as feasible (e.g. upon completion of any required NEPA process).*

**E. To assure compliance with the T&E species mitigation plan, and effectiveness of the management plan STERLING will:**

1. Establish a trust fund and/or post a bond, prior to initiating any activities, to cover the mitigation plan implementation costs. The amount in the fund or posted in a bond will be commensurate with projected work and associated required mitigation items (see table below). Initial cost estimates; in year 2000 dollars are about \$7.66 million over the life of the mine. Actual amount will be adjusted for inflation.

**Estimated Deposit Summary:**

Year	Deposit/Bond
1	\$ 1,282,300
5	\$ 2,128,200
15	\$ 4,250,000

2. Participate in the development of and be a signer on a Memorandum of Understanding (MOU) that

The Forest shall develop with the Service, FWP, Sterling Mining Company and other parties

deemed appropriate by the Forest. The MOU must be completed prior to the Forest issuing Sterling Mining Company the letter to proceed with the evaluation adit. The MOU shall establish roles, responsibilities and time lines of an Oversight Committee comprised of members of the Forest, Montana Department of Fish, Wildlife and Parks, Sterling Mining Company, the Service, and other parties deemed appropriate by the parties named.

The Oversight Committee shall be responsible for the development of a Comprehensive Grizzly Bear Management Plan and its implementation. The Comprehensive Grizzly Bear Management Plan shall focus on the Cabinet portion of the CYE and would fully include all provisions of the Forest's mitigation plan for grizzly bears, except where superseded by the Service's Biological Opinion. It would also include provisions for adaptive management. The plan would be developed in detail by the parties and agreed to in writing by the Fish and Wildlife Service to assure that human access to grizzly bear habitat, grizzly bear habitat quality, grizzly bear mortality, and habitat fragmentation issues shall be addressed to the extent that jeopardy would be avoided.

The Oversight Committee, led by the Forest, shall over the 35-year life of the mine:

- a) assume responsibility for coordinating various aspects of the Management Plan;
- b) assume responsibility for maintaining effective communication among all Committee members, stake holders, and interested public;
- c) integrate the principles of adaptive management; collect, disseminate where needed, and review new information on grizzly bears, the results of implementation of the Comprehensive Grizzly Bear Management Plan over time, and other information related to CYE grizzly bears. If information or relevant data indicate appropriate, ensure the needed analysis and development of recommendations for changes or additions to the mitigation plan over the 35 year life of the mine, if such action is needed to ensure the proposed action is not likely to jeopardize the CYE grizzly bear population. The Service would review proposed revisions to the Comprehensive Grizzly Bear Management Plan under appropriate section 7 provisions, if required.

The Service shall be a full partner in the development of the MOU and subsequent Comprehensive Grizzly Bear Management Plan, and must agree to the plan in writing, to assure that the plan would serve to avoid jeopardy.

The MOU shall be completed prior to the letter to proceed on the evaluation adit and require the Forest to:

- 1) Ensure the Management Plan is completed prior to the construction phase of the mine.
- 2) Establish time frames for mitigation and implementation of other management to occur prior to the letter to proceed on the phase of the mine associated with that mitigation or management activity.

- 3) Ensure adequate funding, from Sterling, to implement the revised mitigation plan according to the time frames.
- 4) Comply with legal guidelines or processes in as timely manner as possible in order to meet the mitigation plan and/or Comprehensive Grizzly Bear Management Plan implementation schedule.
- 5) Ensure that the mitigation properties and Comprehensive Grizzly Bear Management Plan be approved by the Service to avoid jeopardy to the CYE grizzly bear population according to the schedule(s) described in section B of this mitigation plan. All mitigation properties not specifically mentioned shall have undergone all necessary procedures for procurement including recordation, prior to the letter to proceed on the associated phase of the mine.
- 6) Establish language and legal procedures to ensure that mitigation properties acquired through fee title, land transfer or conservation easement:
  - a. are perpetual;
  - b. meet federal policies and regulations regarding such realty actions;
  - c. have Service approval that they would avoid jeopardy;
  - d. would be implemented and recorded in advance of the phase of the mine with which they are associated;
  - e. would increase or at least maintain a no net loss of MS-1 CYE habitat;
  - f. would be adequately funded such that enforcement of easement terms is assured;
  - g. would be selected on a priority basis with biologically justifiable rationale approved by the Service to choose lower priority properties;
  - h. would ensure management in support of grizzly bear survival and recovery if in public ownership.

The Comprehensive Grizzly Bear Management Plan shall include this mitigation plan, except where the mitigation plan has been superceded by the Service's Biological Opinion. In addition, processes shall be established to ensure that access management, prevention of habituation, educational opportunities, reporting and monitoring, enforcement of easements, and management actions are being adequately implemented. Further, the Comprehensive Grizzly Bear Management Plan will establish processes to revise management, access, education or habitat enhancement strategies as new research or policies, such as revised IGBC guidelines.

3. Contribute funding to support radio telemetry monitoring of bear movements in the Southern Cabinet Mountains to confirm the effectiveness of mitigation measures implemented to provide a secure north to south movement corridor. The Forest shall ensure that adequate funding, provided by Sterling, is available to monitor bear movements and use of the Southern Cabinet Mountains to confirm the effective implementation of mitigation measures. Information gained would be useful in determining whether the mitigation plan is working as intended. If not, the information would help in developing new management strategies that would be incorporated in the Biological Opinion through appropriate ammendments. Funding would supplement ongoing research and

monitoring activities in the CYE, would be conducted or coordinated by the Service's grizzly bear researcher in Libby or his equivalent and would focus on grizzly bears in the Cabinet Mountains. Funding would include money for the following (but not limited to): trapping, hair sampling and analysis, radio collars, flight time, monitoring, and data analysis, including all equipment and support materials needed for such monitoring. The Forest shall ensure that funding, provided by Sterling, is available on an annual basis, two months in advance of the fiscal year (October) of the year it is to be used for the life of the mine. Details of the monitoring activities and budget would be outlined in the Management Plan. Funding would be provided prior to the letter to proceed on the evaluation addit and would continue throughout the life of the mine through the reclamation phase.